

Amendments to the Title of the Invention and Specification:

Please CHANGE the title of the invention to read as follows:

METHOD OF RAKING EXPERTS BASED ON DOCUMENT
LINGUISTIC ANALYSIS

Please replace the paragraph bridging pages 1 and 2 with the following amended paragraph:

Not only do Expert Finders help to effectively manage the useful knowledge held by individuals and thus supplement additional resources, but it also contributes timely and up-to-date procedural and factual knowledge to enterprises. In order to fully ~~maximise~~ maximize individually held resources, it is necessary to encourage people to share such valuable data. To enable such data to be ~~utilised~~ utilized to its maximum potential it is important that the collection and management of the data does not interfere with an individual's everyday tasks or place onerous obligations on individuals. Thus collection and management must be "invisible" to the individual until their assistance is required. As expertise is accumulated through task achievement, it is also important to exploit it as it is created. To achieve this an automated system that does not rely on the individual is required. Such an approach allows individuals to work as normal without demanding changes in working environments.

Please replace the first full paragraph on page 2 with the following amended paragraph:

Expert Finders exploit already existing data banks such as e-mail communications to capture personal expertise while allowing users to work as they normally would do without changing the working environment. E-mail communications are an ideal data bank for Expert Finders to exploit because e-mail communication has become a major means of exchanging information and acquiring social or ~~organisational~~ organizational relationships, thus it can be a good source of information about recent and useful co-operative activities among users. In addition, as it represents an everyday activity, it requires no major changes to the working environment.

Please replace the second full paragraph on page 4 with the following amended paragraph:

User expertise may be considered to be ~~action-centred~~ action-centered and often distributed in the individual's action-experiences and thus using linguistic ~~modelling-action-centred~~ modeling action-centered statements in the extracts can be highlighted and thus a more sophisticated analysis of sentences or extracts containing references to a subject in a document can be made, allowing expert rankings to be derived. With this approach, the extracts may be regarded as the ~~realisation~~ realization of involved knowledge, user expertise can be ~~verbalised~~ verbalized as a direct indication of user views on discussed subjects,

and the levels of expertise are distinguished by taking into account the degree of significance of the words employed in the extracts.

Please replace the paragraph bridging pages 6 and 7 with the following amended paragraph:

Figure 2 is a graph ~~summarising~~ summarizing the results of a case study carried out to test that Expertise ~~Modelling~~ Modeling using Natural Language Processing produces comparable or higher accuracy in differentiating expertise from factual information compared to that of the frequency-based statistical model, and that differentiating expertise from factual information supports more effective query processing in locating the right experts; and

Please replace the second full paragraph and the paragraph bridging pages 8 and 9 with the following amended paragraphs:

This analysis is based on Speech Act Theory (SAT), which proposes that communication involves the speaker's expression of an attitude (i.e. an illocutionary act) towards the contents of the communication. It suggests that information can be delivered with different communication effects on recipients depending on different speaker's attitudes, which are expressed using an appropriate illocutionary act, which represents a particular function of communication. The performance of the speech act is described by a verb, which posits a core element as the central ~~organiser~~ organizer of the sentence. In

addition, the fact that working practices are reflected through task achievement implies that personal expertise can be regarded as action-oriented emphasizing the important role of a “first person” subject in expertise ~~modelling~~ modeling.

EMNLP extracts user expertise from the sentences, which have “first person” subjects, and determines expertise levels based on the identified main verbs. Whereas SAT reasons about how different illocutionary verbs convey the various intentions of speakers, NLP determines the intention by mapping the central verb in the sentence to the pre-defined illocutionary verb. The decision about the level of user expertise is made according to the defined hierarchies of the verbs, initially provided by SAT. SAT provides the categories of illocutionary verbs (i.e. assertive, commissive, directive, declarative, and expressive), each of which contains a set of exemplary verbs. EMNLP further extends the hierarchy in order to increase its coverage for practicability by using the WordNet Database. EMNLP first examines all verbs occurring in the collected messages, and then filters out verbs, which have not been mapped onto the hierarchy. For each verb, it consults ~~the WordNet~~ a database known by the tradename WordNetTM in order to assign a value through chaining its synonyms; for example, if the synonym of the given verb is classified into “assertive” value, and then this verb is also assigned into “assertive”.

Please replace the second full paragraph on page 11 with the following amended paragraph:

Special attention is given to gathering domain specific terminologies possibly collected from technical documents such as task manuals or memos. This is particularly useful for the semantic analysis, which identifies concepts and relationships within the NLP framework, since these terminologies are not retrievable from general-purpose dictionaries (e.g. the WordNet_{TM} database).